



**Figure 37.23:** Total and elastic cross sections for  $\Delta p$  and total hadronic cross sections for  $\gamma d$ ,  $\gamma p$ , and  $\gamma \gamma$  collisions as a function of laboratory beam momentum and the total center-of-mass energy. Corresponding computer-readable data files may be found at <http://pdg.lbl.gov/xsect/contents.html> (Courtesy of the COMPAS group, IHEP, Protvino, Russia, August 1999.)